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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/613,776

07/02/2003

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EXAMINER

CHAN, SAI MING

ART UNIT

PAPER NUMBER

2112

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/613,776	Applicant(s) SRINIVASAN ET AL.	
	Examiner Sai-Ming Chan	Art Unit 2112	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 7/02/2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/11/06</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to because on **fig. 5b**, box 1, the reference number for box 1 is illegible.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities:

a) Page 19, paragraph 0065, line 3, Fig. 20 is not found in the drawings.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (e) the invention was described in

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-12** are rejected under 35 U.S.C. 102(e) as being anticipated by **Welin (U.S. Patent Application Publication # 2006/0007871 A1)**.

Consider **claim 1**, Welin clearly shows and discloses a traffic management processor (page 42, claim 83 (single-chip integrated circuit) and abstract, lines 4-12) for scheduling packet (page 42, claim 83, lines 6-7 and paragraph 0017, lines 1-9, paragraph 0061, lines 1-5) for transmission across a network, comprising:

a departure time calculator (fig. 31, fig. 32, paragraph 0288, lines 1-3) for generating a departure time (page 42, claim 83, line 8 (deadline interval) and paragraph 0016, lines 1-6) for each packet; a departure time table (paragraph 0294, lines 1-5) having a plurality of rows, each having a first portion for storing the departure time for a corresponding packet and having a second portion for storing a rollover bit (fig. 32,

paragraph 0018, lines 1-7 (S bit and MSB bit)); and a reset circuit (paragraph 0332, lines 1-9) coupled to the departure time calculator and to the departure time table, the reset circuit configured to reset the rollover bits from a first logic state to a second logic state at a predetermined time (paragraph 0567, paragraph 0610, lines 5-7, paragraph 0632, lines 1-4, paragraph 0685, and fig.32)).

Consider **claim 2, as applied to claim 1 above**, Welin clearly shows and discloses wherein the departure time calculator comprises: a counter for generating an arrival time (paragraph 0028, fig. 8, paragraph 0249, lines 6-7) ; and an arithmetic logic unit (paragraph 0677, lines 11-12 (ALU)) coupled to the counter and configured to generate the departure (paragraph 0287) in response to the arrival time.

Consider **claim 3, as applied to claim 2 above**, Welin clearly shows and discloses wherein the reset circuit has an output to provide a reset signal to the departure time table, wherein the reset signal is asserted to reset the rollover bits (paragraph 0018, lines 6-7 (S bit and MSB bit)) when the counter reaches a value indicative of the predetermined time (paragraph 0610, lines 5-6).

Consider **claim 4, as applied to claim 1 above**, Welin clearly shows and discloses compare logic coupled to the departure time table and configured to compare the departure times with each other to determine which departure time is the earliest (paragraph 0685 and fig. 32).

Consider **claim 5, as applied to claim 1 above**, Welin clearly shows and discloses wherein each rollover bit comprises a most significant bit (paragraph 0018, lines 6-7 (sign bit and MSB bit)) of the corresponding departure time.

Consider **claim 6**, Welin clearly shows and discloses a traffic management processor for scheduling packets for transmission across a network, comprising: a counter (paragraph 0249, lines 6-7) for generating an arrival time for each packet; an arithmetic logic unit (paragraph 0677, lines 11-12 (ALU)) having an input to receive the arrival time and configured to generate a departure time response to the arrival time; a reset circuit (paragraph 0332, lines 1-9) having an input to receive the arrival time and having an output for generating a reset signal; and a table (paragraph 0294, lines 1-5 ) for storing having a plurality of rows, each having a first portion for storing the departure time for a corresponding packet and having a second portion for storing a rollover bit, wherein the reset signal selectively resets the rollover bit from a first logic state to a second logic state in response to the reset signal (paragraph 0567, paragraph 0610, lines 5-7, paragraph 0632, lines 1-4, paragraph 0685, and fig.32)).

Consider **claim 7, as applied to claim 6 above**, Welin clearly shows and discloses wherein the reset circuit asserts the reset signal to reset the rollover bits (paragraph 0018, lines 6-7 (S bit and MSB bit)) when the counter generates a maximum arrival time (paragraph 0610, lines 5-6).

Consider **claim 8, as applied to claim 6 above**, Welin clearly shows and discloses wherein each rollover bit comprises a most significant bit (paragraph 0018, lines 6-7 (S bit and MSB bit)) of the corresponding departure time.

Consider **claim 9, as applied to claim 6 above**, Welin clearly shows and discloses compare logic (fig. 32 and paragraph 0685) coupled to the table and configured to compare the departure times with each other to determine which departure time is the earliest (paragraph 0685 and fig. 32).

Consider **claim 10**, Welin clearly shows and discloses a method for operating a packet scheduler (page 41, claim 39, lines 1-10; page 42, claim 83, lines 6-7; and paragraph 0017, lines 1-9, paragraph 0061, lines 1-5), comprising: determining an arrival time for each packet received; calculating a departure time (claim 39, paragraph 0016, lines 1-6) each packet in response to the packet's arrival time; storing the departure times in a departure time table; asserting a rollover corresponding to each departure time (paragraph 0018, lines 6-7 (sign bit and MSB bit)); and de-asserting the

rollover bits when the arrival time reaches a maximum value (paragraph 0610, lines 5-6).

Consider **claim 11, as applied to claim 10 above**, Welin clearly shows and discloses wherein the de-asserting comprises: comparing the arrival time with the maximum value (paragraph 0610, lines 5-6); and selectively asserting a reset signal in response to the comparing (page 36, paragraph 0688).

Consider **claim 12, as applied to claim 11 above**, Welin clearly shows and discloses resetting the rollover bits to a logic low value (page 36, paragraph 0688) in response to the reset signal.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application Publication : US 2003/0016686 A1, inventor: Wynne et al., issued: 1/23/2003.



Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sai-Ming Chan whose telephone number is (571) 270-1769. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

**Sai-Ming Chan**

S.C./ sc

December 18, 2006

  
RAPHAEL PEREZ-GUTIERREZ  
SUPERVISORY PATENT EXAMINER

1/4/07